FIG. 1

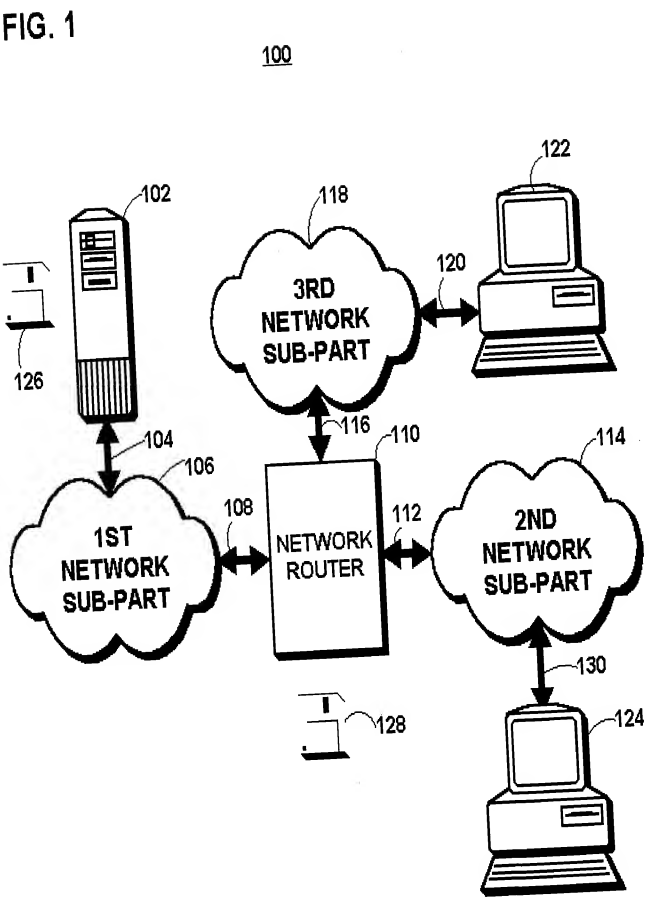

100
102
118
122
120
3RD
NETWORK
SUB-PART
126
104
116
110
114
106
108
112
1ST
NETWORK
SUB-PART
NETWORK
ROUTER
2ND
NETWORK
SUB-PART
130
128
124

FIG. 2

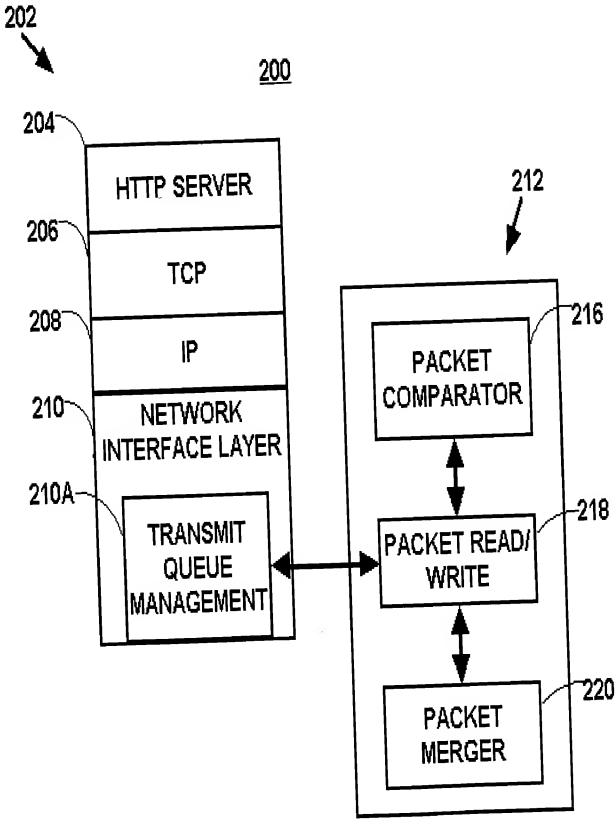

202
200
204
HTTP SERVER
206
TCP
208
IP
210
NETWORK INTERFACE LAYER
210A
TRANSMIT QUEUE MANAGEMENT
212
216
PACKET COMPARATOR
218
PACKET READ/ WRITE
220
PACKET MERGER

FIG. 3

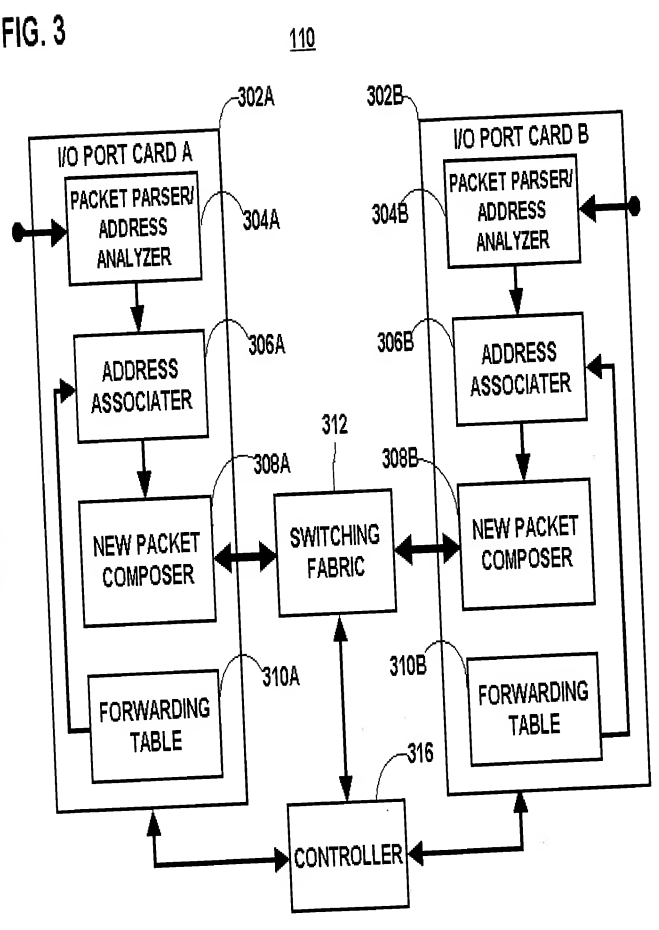

110
302A
302B
I/O PORT CARD A
I/O PORT CARD B
PACKET PARSER/ ADDRESS ANALYZER
304A
304B
PACKET PARSER/ ADDRESS ANALYZER
ADDRESS ASSOCIATER
306A
306B
ADDRESS ASSOCIATER
312
308A
308B
NEW PACKET COMPOSER
SWITCHING FABRIC
NEW PACKET COMPOSER
FORWARDING TABLE
310A
310B
FORWARDING TABLE
316
CONTROLLER

FIG. 4A

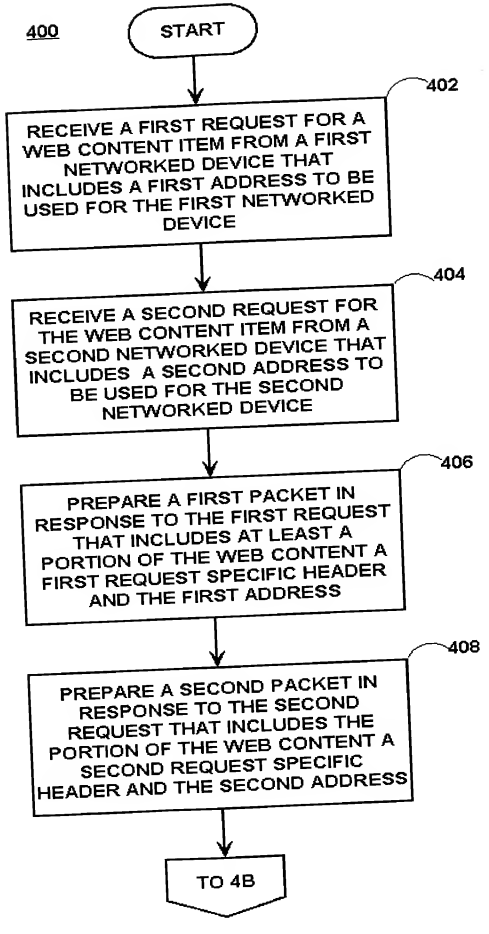

400
START
402
RECEIVE A FIRST REQUEST FOR A WEB CONTENT ITEM FROM A FIRST NETWORKED DEVICE THAT INCLUDES A FIRST ADDRESS TO BE USED FOR THE FIRST NETWORKED DEVICE
404
RECEIVE A SECOND REQUEST FOR THE WEB CONTENT ITEM FROM A SECOND NETWORKED DEVICE THAT INCLUDES A SECOND ADDRESS TO BE USED FOR THE SECOND NETWORKED DEVICE
406
PREPARE A FIRST PACKET IN RESPONSE TO THE FIRST REQUEST THAT INCLUDES AT LEAST A PORTION OF THE WEB CONTENT A FIRST REQUEST SPECIFIC HEADER AND THE FIRST ADDRESS
408
PREPARE A SECOND PACKET IN RESPONSE TO THE SECOND REQUEST THAT INCLUDES THE PORTION OF THE WEB CONTENT A SECOND REQUEST SPECIFIC HEADER AND THE SECOND ADDRESS
TO 4B

FIG. 4B

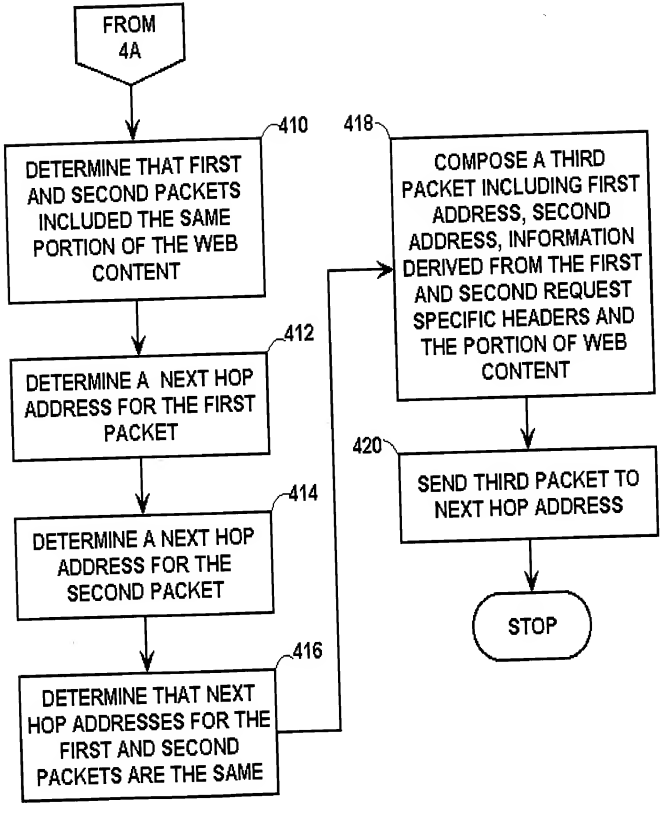

FROM 4A
410
DETERMINE THAT FIRST AND SECOND PACKETS INCLUDED THE SAME PORTION OF THE WEB CONTENT
412
DETERMINE A NEXT HOP ADDRESS FOR THE FIRST PACKET
414
DETERMINE A NEXT HOP ADDRESS FOR THE SECOND PACKET
416
DETERMINE THAT NEXT HOP ADDRESSES FOR THE FIRST AND SECOND PACKETS ARE THE SAME
418
COMPOSE A THIRD PACKET INCLUDING FIRST ADDRESS, SECOND ADDRESS, INFORMATION DERIVED FROM THE FIRST AND SECOND REQUEST SPECIFIC HEADERS AND THE PORTION OF WEB CONTENT
420
SEND THIRD PACKET TO NEXT HOP ADDRESS
STOP

FIG. 5

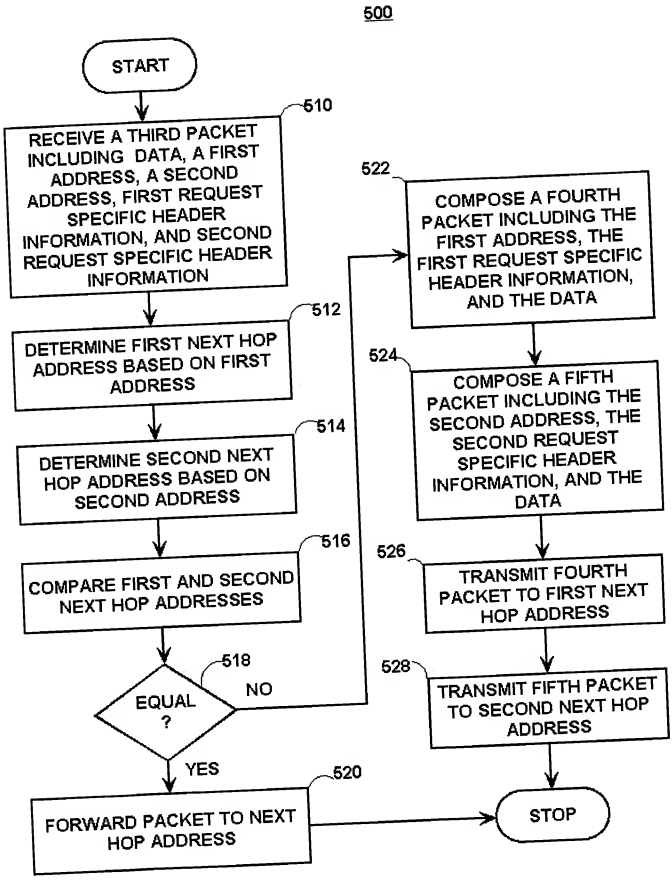
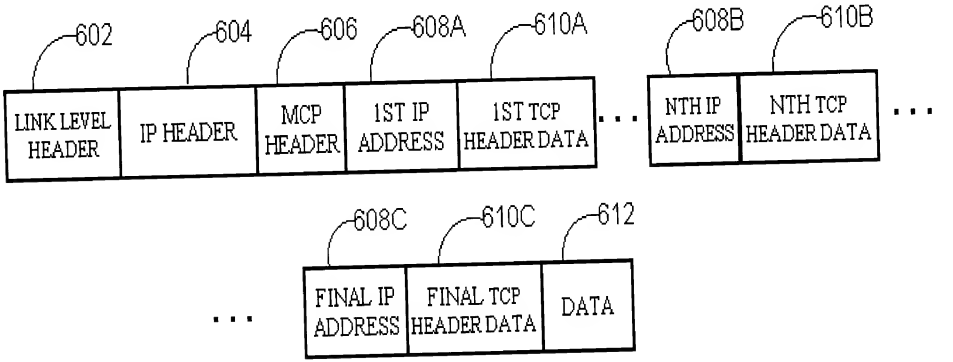

500
START
RECEIVE A THIRD PACKET INCLUDING DATA, A FIRST ADDRESS, A SECOND ADDRESS, FIRST REQUEST SPECIFIC HEADER INFORMATION, AND SECOND REQUEST SPECIFIC HEADER INFORMATION
510
DETERMINE FIRST NEXT HOP ADDRESS BASED ON FIRST ADDRESS
512
DETERMINE SECOND NEXT HOP ADDRESS BASED ON SECOND ADDRESS
514
COMPARE FIRST AND SECOND NEXT HOP ADDRESSES
516
EQUAL ?
518
NO
YES
FORWARD PACKET TO NEXT HOP ADDRESS
520
COMPOSE A FOURTH PACKET INCLUDING THE FIRST ADDRESS, THE FIRST REQUEST SPECIFIC HEADER INFORMATION, AND THE DATA
522
COMPOSE A FIFTH PACKET INCLUDING THE SECOND ADDRESS, THE SECOND REQUEST SPECIFIC HEADER INFORMATION, AND THE DATA
524
TRANSMIT FOURTH PACKET TO FIRST NEXT HOP ADDRESS
526
TRANSMIT FIFTH PACKET TO SECOND NEXT HOP ADDRESS
528
STOP

FIG. 6

600



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